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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,930	12/13/2001	Kevin Chaite Rotheroe	1830.66026	2200

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EXAMINER

MCDERMOTT, KEVIN

ART UNIT	PAPER NUMBER
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3635

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,930

Applicant(s)

ROTHEROE, KEVIN CHAITE

Examiner

McDermott, Kevin

Art Unit

3635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8,10-17,19-24,26-28,30 and 31 is/are pending in the application.

4a) Of the above claim(s) ____ is/are withdrawn from consideration.

- 5) ☐ Claim(s) ____ is/are allowed.

- 6) ☐ Claim(s) ____ is/are rejected.

- 7) ☒ Claim(s) 9,18,25 and 29 is/are objected to.

- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Drawings

The photographs provided for figures 13-31 are inadequate. Drawings are required.

Figures 4A-6D should be labeled separately, not together as figure 4, 5, and 6, respectively.

Specification

The disclosure is objected to because of the following informalities:

- a. Page 10, line 20. Please provide the figure number.
- b. Page 30, line 21. Please provide the figure number.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 6 recites "plurality of radially outer portions". Examiner is not certain what Applicant intends to mean.

Regarding claim 23, line 1 recites "said perforations". There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 as best understood, and claims 1, 7, 8, and 10-13, are rejected under 35 U.S.C. 102(b) as being anticipated by Kasuga.

Regarding claim 1 as best understood, Kasuga discloses in figures 2 and 3 and in column 3, lines 29-52, a side frame 2 comprising a linear portion 2a and a bent portion 2b. The linear portion 2a and the bent portion 2b are joined together by fittingly connecting the rear end of the linear portion 2a with the front end of the bent portion 2b.

Linear portion 2a is hexagonal in cross section and has ribs 11 diagonally connecting the inner faces of the linear portion 2a. The center where the ribs 11 intersect is the claimed elongated, axially extending central portion. The ribs 11 radially emanate from the center and extend axially along the central portion. Outer portions are disposed to extend in the axial direction along the length of the central portion and between the ribs 11 in cross section, and axially extend along the length of the central portion. The outer portions define the outer surface of the member.

Bent portion 2b is hexagonal in cross section and has a circular elongated axially extending central portion with ribs radially emanating therefrom. The ribs also extend axially along the portion 2b. Portion 2b has outer portions extending in the axial

direction along the length of the central portion and between the ribs 11 in cross section, and defining the outer face of the member.

Regarding claim 7, the central portion of bent portion 2b is curvilinear.

Regarding claim 8, because the ribs 11 emanate from and are connected to the central portion of portion 2b, the ribs 11 are also curvilinear.

Regarding claim 10, the central portion of portion 2b and the ribs 11 have a curvilinear radial trajectory.

Regarding claim 11, the central portion of portion 2a and the ribs 11 have a linear radial trajectory.

Regarding claim 12, portions 2a and 2b each have a connecting structure on at least one axial end for mutual connection, forming a male/female connection. Portion 2a has a hollow female portion that fits over portion 2b's male portion.

Regarding claim 13, the male/female connections of portions 2a and 2b are self-registering.

Claim 1 as best understood, and claims 2 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Eichner.

Eichner discloses in figures 1 and 2 and in column 1, line 48 to column 2, line 22, a body 10 that is cylindrical or tubular and has therein webs 12 and 14 extended throughout the length of the body. The webs radiate from the longitudinal axis of the body to the wall thereof and serve to lend strength to the body both longitudinally and transversely. The structure may be extruded from aluminum or any other suitable metal

or alloy of light-weight and that the finished product may be the result of a single operation.

The intersection of the webs is the claimed elongated, axially extending central portion. The outer surface is the claimed plurality of outer portions extending in the axial direction along the length of the central portion and extending between the web portions in cross section.

Regarding claims 2 and 21, the portions comprising the outer surface are arched.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasuga in view of Rafter.

Kasuga's disclosure is discussed above. However, regarding claims 3 and 4, Kasuga does not disclose the ribs 11 having a plurality of perforations radially disposed between the central portion and the outer surface.

Rafter discloses in figures 1 and 2 and in column 1, lines 17-23, a structural member formed from metal sheet provided with a plurality of spaced apertures along the longitudinal centerline thereof, thus presenting a considerable saving in metal and weight at places where the metal serves no purpose.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide weight reducing openings in the structure of Kasuga, including the rib portions 2a, 2b of Kasuga.

One of ordinary skill would have made such a modification to reduce the weight of the portions 2a, 2b and to save money.

Regarding claim 6, Kasuga does not disclose axially disposing perforations within the ribs 11 at axial intervals.

Rafter discloses in figures 1 and 2 spacing the apertures along the centerline of the structural member.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide weight reducing openings at axial intervals in the structure of Kasuga, including the rib portions 2a, 2b of Kasuga.

One of ordinary skill would have made such a modification to reduce the weight of the portions 2a, 2b and to save money.

Regarding claim 5, it would have been an obvious matter of design choice to dispose the rib openings within the ribs radially symmetrically about the central portion, since Applicant has not disclosed that arranging the openings in this way solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the openings arranged in any order.

Claims 14-16, 20, 22, 26, 27, 31, and claim 23 as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Eichner in view of Rafter.

Eichner's disclosure is discussed above. Additionally, Eichner's webs have a linear radial trajectory. However, Eichner does not disclose perforating the webs.

Rafter discloses in figures 1 and 2 and in column 1, lines 17-23, a structural member formed from metal sheet provided with a plurality of spaced apertures along the longitudinal centerline thereof, thus presenting a considerable saving in metal and weight at places where the metal serves no purpose.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide weight-reducing openings in the structure of Eichner, including the web portions of Eichner.

One of ordinary skill would have made such a modification to reduce the weight of the web portions and to save money.

Regarding claim 16, Eichner does not disclose axially disposing perforations within the webs at axial intervals.

Rafter discloses in figures 1 and 2 spacing the apertures along the centerline of the structural member.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide weight-reducing openings at axial intervals in the structure of Eichner, including the web portions of Eichner.

One of ordinary skill would have made such a modification to reduce the weight of the web portions and to save money.

Regarding claim 31, the central portion and the webs of Eichner have a linear axial trajectory.

Claims 17, 19, 24, 28, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eichner in view of Rafter and further in view of Kasuga.

The disclosures of Eichner and Rafter are discussed above. However, neither Eichner nor Rafter disclose a curved structure having curved webs.

Kasuga's disclosure is also discussed above. As discussed, Kasuga discloses a frame having a bent portion 2b.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the structure of Eichner curved as well as linear and to curve the webs to correspond to the central portion.

One of ordinary skill would have made such a modification so that Eichner's structure could be used in more situations.

Allowable Subject Matter

Claims 9, 18, 25, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

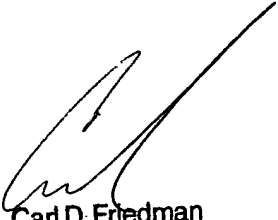
The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose and it does not appear obvious to modify the prior art to disclose a unitary metal structure having the limitations of the respective independent claims for claims 9, 18, 24, wherein the radial web members vary in radial length along the length of a structural member.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Kevin McDermott, whose telephone number is 703-308-8266.



Carl D. Friedman
Supervisory Patent Examiner
Group 3600

KM 3/07/03